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THOMAS G. NEWMAN,
EDITOR.

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EDITORIAL BUZZINGS.

Did you ever, since ever you ever were born,
Hear about little Miss May Unicorn.
Who spent all her money
For honey
(How funny!)
When she might have kept bees,
And obtained it from these,
And saved all the money
She spent for the honey
To send to the heathen way over the seas!
—*St. Nicholas Magazine.*

Prof. McLain is engaged to give a lecture on bee-keeping, at the Academy of Sciences on Adams street, in this city, on Feb. 27.

The Ohio State Convention, held last week at Columbus, O., was a decided success. Dr. Mason said that it was one of the best he ever attended. But a correspondent remarks that "the Doctor is a whole convention himself." We shall publish the proceedings as soon as received.

Bees in Manitoba.—A correspondent wants to know how bee-keeping would pay in southern Manitoba. It is too far north to expect much for bee-keeping. The winters are too long; making the "long confinement" disastrous. Perhaps some of our subscribers in that region can better answer the question.

An Honor.—Messrs. Chas. Dadant & Son, of Hamilton, Ills., write us as follows on Jan. 13, 1888:

We extend our congratulations for the new and neat appearance of the old AMERICAN BEE JOURNAL. It is a pleasure to peruse such a well-printed paper, and it does honor to its publisher. Long may it live!

The Weather in England has been quite mild. The London *Journal of Horticulture*, in its issue of Jan. 5, 1888, remarks as follows concerning it and the bees:

During the months of November and December the weather has been changeable; frost, snow, and rain alternating with extreme mildness for the season, the temperature often being above 50° Fahr. The lowest temperature during November was on the 24th, the thermometer registering 19°, and the lowest during December was 10° on the 22d in North Britain.

On the last day of November and on the first day of December the thermometer stood above 50°, and the bees were alert, many of them on the wing, and a great number gathering water, evidence that, owning to the mildness, breeding had begun earlier than is usually the case.

One colony in particular was very busy, and killed the last of its drones on Dec. 1. This colony, I believe, had a young queen, which was fertilized as late as Oct. 27, but I have not sufficient data at present to confirm this, but a few weeks will prove it, as the bees were half-bred Syrians, and the drones living were Carniolan. In addition to the above, either two or three had preserved their drones until the two days mentioned.

The Canadian Bee Journal makes the following friendly allusion to us in its last issue:

The AMERICAN BEE JOURNAL comes to us in an entirely new dress of type, which makes a decided improvement in its appearance. In its articles, the AMERICAN BEE JOURNAL keeps abreast of the times, is a credit to its publishers, and worthy of patronage. We wish it every prosperity.

Our thanks are hereby extended to friends Jones and Macpherson. We also wish prosperity to the *Canadian Bee Journal.*

Mrs. L. Harrison, of Peoria, Ills., is to give an address on "The Apiary," before the Farmers' Institute, to be held at Peoria, Ills., on Feb. 1, 1888. The meeting will be held in Rouse's Hall.

Feeding Partly-Filled Combs.—A subscriber in Ontario, Canada, asks the following question:

I have some colonies that I fear have not enough food to carry them through the winter. I also have combs partly filled; will it do to put those light colonies over the the frames that are partly filled with honey, and give them a passage way out of the bottom of the super containing the honey?

If the supers with partly-filled combs are placed over the bees, they may go up and get the honey, but will not be likely to go down to it. There is danger, however, of letting the heat escape by having the super over the cluster.

If the partly-filled combs are placed at the side of the cluster (in place of empty ones), and holes made through the combs, the bees may take the honey if the weather is not too severe.

The St. Paul Ice Palace and winter carnival opens Jan. 25, and continues ten days. One fare for round trip on all railroads

Bees on Shares.—F. Richards, of northern New York, asks the following questions. As others may desire the information, we give it a place here:

Which is the proper way to take bees on shares? Must the taker feed them at his expense, if necessary? Must he furnish the honey-boxes and foundation, and give the owner of the bees back his original number and half of the increase?

It is usnal for one party to furnish bees, and the other party the care and labor. The expense of new hives, surplus-boxes, comb foundation and queens is usually divided equally, and at the end of the season the honey and increase of bees are equally divided—leaving each to take all chances of marketing, as well as wintering.

Make a written contract, stating the agreement in full, and then there will be less liability of a misunderstanding.

Pleasure and Profit.—S. T. Pettit, of Belmont, Ont., wrote as follows on Jan. 18, 1888, concerning our paper:

I am more than ever pleased with the good old AMERICAN BEE JOURNAL. Your staff of writers in the question drawer department are all so well qualified to give simple, plain, intelligent answers, that it is at once a pleasure and a profit to study these answers.

Postponed for One Year—that is what was decided to do, as will be seen by the following letter:

Please state in the next issue of the BEE JOURNAL, that the meeting of the "Eastern Iowa and Western Illinois Bee-Keepers' Association" has been postponed for one year, or until "called:" it being thought best to do so upon consultation of officers.
C. H. DIBBERN, *Sec.*

Cabbage and Celery Plants.—A guide to their successful propagation. A new manual of instruction by Isaac F. Tillinghast. Seed and plant grower, and editor of *Seed Time and Harvest*, LaPlume, Pa., 32 pages. Illustrated. Price 25 cents.

☞ We will send the above and the BEE JOURNAL for one year, for $1.15.

A Favorable Word from any of our readers, who speak from experience, has more weight with friends than anything we might say. Every one of our readers can lend us a helping hand, in this way, without much trouble, and at the same time help to scatter apicultural knowledge and promote the welfare of our pursuit.

New Catalogues for 1888 are on our desk, from the following persons:

G. D. Black, Brandon, Iowa—8 pages—Bees, Queens, Honey, etc.

Iowa Seed Co., Des Moines, Iowa—48 pages—Vegetable and Garden Seeds.

Look Over last year's numbers of the BEE JOURNAL, and if any are missing, send for them at once, as we have but few left now, and they are daily becoming less.

GLEANS OF NEWS.

A "CORNER" IN HONEY.

Mr. Albert H. Lind, of Fond du Lac Co., Wis., has sent us the following item taken from the New York *World* of Dec. 21, 1887:

KANSAS CITY, Mo., Dec. 19.—A "corner" on honey exists in this section; one firm here holding nearly all of the product that there is in town. The crop was a light one all over the country. In this State the product was not large enough to feed the bees for the winter, and honey had to be bought for that purpose.

The California crop was a small one, and the product of the hives in Illinois and Indiana was light. New York failed to secure the usual supply, which is very large, the New York crop being barely large enough to supply the home demand.

That is not much of a "corner!" We might say the same of Chicago; nearly all the honey now for sale being held by about two "firms!" And yet all buyers can be accommodated.

The following sensational item we take from the Chicago *Times* of Jan. 15, 1888. It is headed, "Now it is a Honey Trust—The Latest Combination Proposed to Boost up Prices:

The convention of honey-producers in the State of New York will begin at Utica Tuesday next. Three days will be occupied in the deliberations. J. L. Scofield will preside. The producers of over 5,000,000 pounds of comb honey and 1,000,000 pounds of extracted honey as an annual crop will be present.

Among other subjects to be discussed will be the shape, size, and style of the packages for the coming year, the price to be charged to the wholesale dealers, and a plan for unity of action to prevent the cheapening competition which has marked the sale of honey during the past.

It is proposed to form a trust, to be composed of all the large producers in the State, nominally to regulate the size of combs, so as to unify the marketable packages, but actually to buy up all surplus honey when there is a glut of production, so as to keep up the price and shut out competitors who might be willing to sell at a sacrifice. It is expected that this plan will meet with great opposition from the small producers.

At this writing the New York Convention has held its last session, but we are not yet advised as to the "doings" there. We hope to be able to lay it before our readers next week.

The "Honey Trust" is probably only a canard, but of that we shall hear more definitely when the proceedings are published. To control, in a healthy and honorable way, the honey market, is very desirable and praise-worthy.

The Echo, a nice dollar weekly newspaper of Detroit, Mich., makes mention of us in the following language:

The AMERICAN BEE JOURNAL, of Chicago, now entering upon its 24th year in a highly successful career, is the oldest paper in America devoted to the interests of its special field. It is well edited in all of its departments, is attractive in appearance, and is a reliable authority upon the topics of which it treats.

The "Wiley Lie" in England.

It is exceedingly unfortunate that in the absence of its editor, some one has endorsingly copied in an editorial in the *British Bee Journal*, the silly lies going the rounds of the newspapers, about "artificial honey" being made in New York, etc., *a la* Wiley! Did we not know that the editor, Mr. Cowan, was at his winter home in Switzerland, and that he therefore knew nothing of its publication until seeing it in the *Bee Journal*, we should feel much worse about it.

The article in question may be found on page 568 of the *British Bee Journal* for Dec. 28, 1887. It reads thus:

We have noticed the ever-increasing production of honey all over the world, but this is not the danger the apiculturist has to contend with. America and Canada may collect their tons of pure nectar, and yet there is room for more. By an increased sale of honey our British productions will come to the front; once let a man taste prime honey, and he will never go back to inferior. The danger we have to contend with is the unprincipled scientist, the man who uses his knowledge of bees for unlawful purposes; and further, the man who advances his nefarious scheme without the aid of bees at all. The history of the first of these individuals we have recently learnt from a clergyman who had been traveling in the far West, and visited many of the adulterating bee-farms. This apparent bee-keeper settles down to carry out his practices in a quiet place with a favorable climate; he has a large number of hives, but the pasturage of the district is quite immaterial to him, as his bees have to obtain their stores from large feeders placed all over the apiary. Containing what? Our informant was unable to find out, as although everything in the establishment was shown to him without reserve, yet he was not permitted to taste the contents of the vats or feeders from whence the bees were obtaining their supplies. The latter of these scientific bee-keepers is best described in the following quotation from a magazine of this month: "Artificial honey now made in New York is so much like the genuine article that only experts can detect the difference. It is in racks, the same as the natural product, and now and then the wings and legs of a few dead bees are to be seen to further the deception. It can be sold at a profit of 5*d.* per pound.

As usual in such cases, a clergyman is brought into it, so as to give some appearance of truth to the story—for he "visited many of the adulterating bee-farms," says the article.

It is a base slander—a *nefarious lie;* neither the clergyman in question, nor "any other man" ever visited any such "adulterating bee-farms!" They do not exist!!

It is nothing more nor less than a *scandalous falsehood*—the production of a sensational reporter's brain, written for *spice*, but lacking even the flimsiest "thread" of truth!

Its only possible excuse is the infamous "scientific pleasantry" written "for the *fun* of the thing," by Prof. Wiley—who is so unprincipled as to let it "fly" on electric wires to "the uttermost parts of the Earth," without a word of regret, or denial!

When cornered by the AMERICAN BEE JOURNAL he admitted that he wrote it as a scientific pleasantry, never dreaming that any one would imagine it to be a sober fact. Now the *British Bee Journal* republishes it under the heading of "Facts." It is astonishing, to say the least!

We have repeatedly offered large sums of money to persons (one of them a clergyman, too) who had repeated this story as a *fact*, to take us to the place where these "artificial combs" are made, or where the "adulterating bee-farms" may be found, but no one can take us to them! No such places can be found!

Mr. A. I. Root, editor of *Gleanings in Bee-Culture*, has for two years had a standing offer of $1,500 to any one who will point out such places to him—yet there are none who can do it. They do not exist!

Now, when honey is scarce and prices high, it is just the time for putting this "artificial comb honey" on the market at good prices, for our British cotemporary says that it is "so much like the genuine article that only experts can detect the difference." But what are *the facts?* Not even a single pound of the "artificial honey" can be produced! Not even a single "adulterating bee-farm" can be shown!!

Send your "clergyman" over here, Mr. Scribbler, to point out such farms. It will pay him to do so!

Disturbing Bees in Winter.—W. Z. Hutchinson writes as follows on the results of disturbing bees in winter, in the *Farmer's Review*. He argues quite correctly that sometimes it is necessary to disturb them sufficiently to find out if they have sufficient food; and that in such a case it is better to examine them than to let them starve:

Many bee-keepers advise us to lock the bee-cellar, and not open it again until spring, saying that the least disturbance is injurious to the bees. Others say that disturbance is no injury, that the cellar may be entered at any time with a light, the hive opened, and even combs taken out without any deleterious results following.

In all probability the cause of winter losses lies in something aside from disturbing. Improper food, or an undesirable temperature are more to be feared than disturbance; if these are right, disturbance, unless carried to an extreme, will do no harm; if wrong, disturbance may be, and probably is, an aggravation.

But, says one, why disturb them? Well, bees are sometimes short of stores, and bee-keepers might let them starve for fear of disturbing them.

Early in winter bees go into a quiet state bordering on hibernation, and this quiescent state should be as long and quiet as possible; towards spring breeding begins, and the bees are then more active, and disturbance would probably do less harm than in the earlier part of the winter.

It may be questioned if simply going into the cellar with a light and quietly lifting covers or quilts, and peeping under them at the quietly sleeping bees, can be called a disturbance, unless it be too long continued.

It is, of course, a better way to see that the bees have sufficient food in the fall, that they are placed in good warm quarters, and then let them alone, as nothing is gained by disturbing them, but when these things have been neglected, they should be attended to, even though the bees are disturbed thereby.

BIOGRAPHICAL.

FATHER L. L. LANGSTROTH, THE HUBER OF AMERICA.

But few of those who in the present day are using the movable-frame hive and practicing the modern methods and management of progressive bee-culture, realize how many sore "trials and troubles" beset the "pioneers" in developing the pursuit. That development was slow, and every "progressive step" was beset with many difficulties. The methods and management of to-day are an evolution, and to the Rev. L. L. Langstroth and his co-worker, the lamented Moses Quinby, we owe an overwhelming debt of gratitude for their patient and untiring exertions in revealing to us the mysteries of the home of the honey-bee.

Rev. L. L. Langstroth.

Hundreds—aye, thousands — to-day are using the improved methods, who know but little, if anything of these notable men.

We give herewith an illustration showing the kind, and beneficent face of Father Langstroth, (the latest article from whose pen may be found on page 55 of this paper), and subjoin a brief biographical sketch written by Mr. J. E. Pond, for the *American Apiculturist* about four years ago.

It is with great pleasure that we have the productions of his pen, consequent upon the return of his mental powers, by even a brief respite from his painful and oft-returning "head trouble." Mr. Pond's article is as follows :

Lorenzo Lorain Langstroth was born in Philadelphia, Pa., Dec. 25, 1810. As a boy he took great interest in natural history, and the happiest days of his youth were those spent in watching the habits of the various insects found in and near the city of his birth. His parents were of the "old school," and deeming such studies the height of youthful folly, gave him no encouragement therein, and it was not until the year 1838, that he began to learn something of the honey-bee. At that time he procured a colony or two of bees, and began studying them under great disadvantages, he at that time never having seen or heard of a work on bee-culture ; and for the first year of his pursuit in this direction, the only published work of that kind that came to his notice was written by a man who doubted the existence of a queen-bee.

After graduating at Yale College, he pursued the study of theology, and was settled over his first church at Andover, Mass. His health became in a short time so much impaired, that he was obliged to give up his pastoral charge, and in 1839, he removed to Greenfield, Mass., where for a few years he was engaged in teaching.

Finding that out-door labor and exercise of some kind was absolutely necessary, he devoted such as he could spare from his duties as a teacher to his apiary, and carefully verified all the experiments of which he had read, and entered into many of his own, for the purpose of gaining such knowledge by actual observation, as might be useful to him or to bee-keepers in general.

The methods of management then in use were not at all satisfactory to him, and he was constantly endeavoring to devise some way or means, whereby complete control of the whole interior of the hive might be given him.

He thoroughly tested bars and slats, and even endeavored to make a practical use of "the leaf-hive of Huber." This leaf-hive, however, was too clumsy (as any one may learn by attempting to use one), and he became almost discouraged at the poor success he met with.

At last the idea came to him, that if bees will build comb on bars set on top of the hive, why will they not build it in a frame hung in the hive ? He tried this plan with fear and trembling. Failure had been his lot so many times, that he had hardly dared to hope for success with this his new fancy. As we all know, this experiment did succeed, and the result was that in 1852, he introduced the frame to the public, and so well was his work matured, that the same style of frame he then devised, is now used more largely than any other, in the exact form he first devised it, and by the ablest apiarists in the country.

It will be needless to enter into the many discouragements and great opposition, with which he met in his endeavor to bring his frame into general use. It *has* been introduced, and introduced fully and completely; and such are its merits, that the Langstroth frame is now used wherever bees are kept.

By the term Langstroth frame, I do not mean simply the original frame he devised, and which he still advises ; but I do mean that all sectional movable hanging frames, by whatever name may be known, are Langstroth frames.

As an inventor, the name of L. L. Langstroth will live as long as bees are kept, and generations yet unborn will revere his memory. By means of his powers of invention, and through his instrumentality in putting that invention before the public, the apiarist of to-day, with a few days' practice only, is enabled to see and observe for himself, all those mysteries of which Virgil has so beautifully sung, and which the various writers of the past were only enabled to find out, as was Huber, by long years of patient labor, such were the difficulties that then surrounded them.

With the introduction of the frame a new era began, and through its means bee-culture has been raised from a business of insignificance, to one that is now barely second to any other.

Mr. Langstroth was not only successful as an inventor, but also as an author. His treatise on apiculture, "The Hive and the Honey-Bee," stands at the head of all written works on the subject, and has fairly earned the high distinction given it, of "the classic of apiculture."

Mr. Langstroth is now an old and feeble man. His health was impaired in early youth by too close attention to his studies, and now he is able to do but little for himself.

Modest and unassuming in his manners, and confiding as a child in the honesty of the world, he, to-day, instead of having reaped a fortune as the result of his valuable invention, is not worth a single dollar. But for all this, he stands before the world as one of Nature's noblemen, an honest man. He has fairly and fully earned the proud title that all bee-keepers, who know him, admit belongs to him—the prince of apiarists ; the Huber of America.

At the apicultural meeting in Chicago, in 1883, the Rev. L. L. Langstroth was present, and gave an interesting epitome of the rise and progress of American apiculture, and said substantially as follows :

In experimenting with bee-hives he ascertained the exact distance that bees will not join with propolis or build intervening comb. When this fact was demonstrated, all there was to do was to surround the comb in the bar with wood, and leave this distance between it and the hive, and it would not be fastened with propolis, or comb built in it. Thus the movable-frame was born.

While he was experimenting with it, a friend came into his bee-yard, but he did not hear him or see him until he said, "Friend Lorenzo, thee has not made an invention, but it is a revolution." Time has proved this to be true.

Mr. Langstroth said, that if the movable-frame had not been born to him, it would have been to some one else, as the time of its advent had fully arrived.

QUERIES AND REPLIES.

TRANSFERRING BEES ON CROOKED COMBS.

Written for the American Bee Journal

Query 509.—On transferring, what would be the best way in the spring to manage a colony of bees, which had built their combs on a curve and diagonally in the movable frames? Would it be better to cut right through or take the frames out bodily, and replace the comb in frames as well as could be done?—New York.

I would transfer by Mr. Heddon's new system.—P. L. VIALLON.

Drive the bees out, turn the hive upside down, cut loose the attachments, if any, from the sides of the hive, and dump out the whole business, *en masse*; then pick out the best combs for transferring, and melt up those curved too much.—C. C. MILLER.

Cut out all the crooked comb, extract the honey, and melt it for wax. Place frames filled wtth full sheets of foundation in the new hives. I would not bother with old crooked combs. Some of the best may be used, especially if it contains brood. It is generally more satisfactory to use full sheets of foundation in the frames.—C. H. DIBBERN.

Take out all the frames, separate carefully, and use all good comb; melt up all that is not suitable, and replace it with foundation.—H. D. CUTTING.

Let the bees swarm; 21 days thereafter drive out all the remaining bees and hive them. Next convert the crooked combs into wax. Such combs are not worth bothering with.—G. M. DOOLITTLE.

Cut out the combs, and shape them to the frames. Use the ordinary methods of transferring.—DADANT & SON.

Start on an outside frame, cut the combs loose from it the best you can, and remove it. You will now have room to cut the combs from the next frame. Use the straightest combs, and reject those that cannot be pressed into position. Secure them in position by wired sticks until the bees fasten them. —J. P. H. BROWN.

The best way is to keep an eye on the bees, while they are building, and not get into such a scrape. If the hive stands just right, perpendicular at the sides, with an inclination of 2 inches, they will do it. Press the combs back, and get them into as good shape as possible.—MRS. L. HARRISON.

If it had no brood, I would give it full sheets of foundation, and melt the combs into wax, and give them the honey from the combs, or feed syrup. I would save the comb with brood in till hatched, and then make that into wax. Take the frames out bodily.—A. B. MASON.

Cut the combs loose from the top-bars, and pry them off. Then cut the combs loose from the side-bars, and lift them out.—M. MAHIN.

Cut the combs out, leaving each one as perfect as possible, and replace them straight in the frames, secured by clamps, sticks or strings.—EUGENE SECOR.

Cut right through and take out one comb at a time from one side. Take the combs in a warm room, and straighten them on a board or between two boards—there will be no harm done to the capped brood in the operation, with care; then transfer, tying the combs in the frames with cord, using side-pieces of wood to support the combs where needed. I would manage them like any other transferred colony, *i. e.*, keep them warm, give plenty of food, and empty combs or full frames of foundation, if needed.—G. L. TINKER.

Practice what has been called "modern transferring," as practiced and advised by James Heddon, and described by him in back numbers of the BEE JOURNAL.—W. Z. HUTCHINSON.

When the weather is sufficiently warm, so that the combs will bend without cracking, remove the frames bodily, then cut the first comb loose from all the frames except the first, and from the first so far as it is not in the right position; then bend it into place and fasten, and do the same with the others in turn.—R. L. TAYLOR.

Sometimes when combs are not quite straight in the frames, but are straight as to themselves, they can be turned about and made straight in the frames. I do no transferring, any more, upon the old system.—JAMES HEDDON.

Take the combs out and straighten them. I do this by laying them in frames, and pressing them, when slightly warm, between two pieces of board. The frames protect the comb. —J. E. POND.

I have frequently transferred combs from frame hives in the condition you describe. My way is to cut loose the two outside frames and remove them. I then pry loose all the frames and lift them out together, bees and all. Commencing on one side, the frames are cut loose and slipped from over the combs. I then removed one comb at a time, and transferred to the frames in the usual way. The curved and crooked combs were first laid on a board and pressed straight, and then fitted into the frames.—G. W. DEMAREE.

Take out in such a manner as will secure the combs with the least break or disfigurement. Just how to do this can only be decided by an eye-witness. Follow Mr. Heddon's plan; it is probably the best, in any event. Wait till swarming-time, and drum out the bees; hiving them on foundation. Wait 21 days and repeat the operation, then extract the honey and melt up the combs.—A. J. COOK.

Cut through the combs; take out one at a time and straighten them, and then transfer in the ordinary way. The "better way" would be to give the bees new frames of comb foundation. Such crooked combs are worth nothing, except for melting into wax.—THE EDITOR.

HORIZONTAL BARS AND BEE-SPACES IN HIVES.

Written for the American Bee Journal

Query 510.—Do you consider the horizontal bars and bee-space in the shallow brood-chambers of the sectional hives an impediment to the queen's laying capacity during the heighth of her egg-laying period?—Illinois.

No.—M. MAHIN.

No.—MRS. L. HARRISON.

Yes.—A. B. MASON.

I do.—J. P. H. BROWN..

I do not.—A. J. COOK.

I do not know; I have never tried them.—J. E. POND.

Yes, "I do," and I do not want any in my hive.—H. D. CUTTING.

Yes. Try it. It will cost you but little.—DADANT & SON.

I do not, and I have several hundred colonies in such hives.—R. L. TAYLOR.

Probably not; still, reason would say that the bees would better be breeding eggs and larvæ, rather than bars and empty space.—G. M. DOOLITTLE.

No. But suppose it was, what then? We do not make hives simply for the convenience of the queen. — W. Z. HUTCHINSON.

They are a disadvantage in the early spring, but seem not to be in the way after the warm weather sets in. See my answer to Query 508.—G. W. DEMAREE.

No, sir, they are not in the least; and the future will demonstrate for you what the past has demonstrated for me.—JAMES HEDDON.

I do not think that the little time lost by the queen in passing from the bottom to the top frames will make much difference.—P. L. VIALLON.

I have had no experience with the sectional brood-chamber hives. I should consider the bars and bee-space through the centre of the brood-nest an objection.—C. H. DIBBERN.

Not having tried these very extensively, I do not know; but I think that

when the proper season for egg-laying and brood-rearing comes, such things are no impediment. When a queen gets up in the section-case, and stays there too long, you will think she enjoys odd nooks.—EUGENE SECOR.

Hardly, as that occurs when the weather is quite warm, and bees can keep a large surface covered, making it easy for the queen to pass back and forth from one section to the other. There may be a little disadvantage from having the bees obliged to cover a space where the queen cannot lay.—C. C. MILLER.

They are, in early spring, when the colony is weak in numbers, but after the bees become strong enough to enter an upper case, I regard the horizontal bee-space between shallow brood-cases an advantage, as breeding is thereby greatly facilitated. Except for queen-breeders' use, a brood-frame should not be so shallow that pollen will be stored in sections placed over one brood-case; that would mean a frame not less than 7 inches deep.—G. L. TINKER.

Oh, no! The inconvenience to the queen, if any, is not worth a passing thought. At that time, the weather is warm. If it is detrimental at any time, it would be in the spring when the bees are weak in numbers; but those having shallow brood-chambers in use, in large numbers, say that such is not any impediment.—THE EDITOR.

CORRESPONDENCE.

DRONES.

At what Age are Drone-Bees Disposed to Mate?

Written for the American Bee Journal
BY REV. L. L. LANGSTROTH.

On page 614 of the BEE JOURNAL for 1885, I published some observations showing that under conditions apparently quite favorable, a drone crept out of its cell in about 24 days and 8½ hours after the queen had laid an egg there. After nearly two years of prostration from severe head trouble, grateful to Him who has restored my health, and with kind greetings to the bee-keeping fraternity, I continue the record of observations then made:

August 13, 1885—Drones fully two days old can only make short, flying leaps.

August 14—When three days old, if tossed up into the air, they fly well. One of this age kept out of the hive half an hour, and eagerly licked up some thin honey.

August 27—I gave some drones just hatched in a good colony, to a strong nucleus.

August 30—At 2 p.m., with the thermometer indicating 80°, four drones took wing. One coming just outside, discharged a whitish, cream-like mass, quite unlike the fæces of the common bee, which was eagerly licked up by the workers! Another, caught before it took wing, discharged a clot of a somewhat yellower color. Evidently drones cannot retain their fæces as long as workers. Some provision would therefore seem to be needed against a colony taking harm, when the cleansing flight of the drones is unreasonably delayed. As no drone was gone more than five minutes, none had left to mate.

September 1 and 2—The weather was unfavorable, and a few drones took wing, but not to mate.

September 3—The temperature was 76° at 2 p.m., and the weather fair, with a gentle breeze. Of the many drones that flew, some returned in less than five minutes, most in ten minutes, and a few in fifteen minutes. I think that not one sought to mate, for a drone, unsuccessful in finding a queen, will not come home until his honey-sac is nearly empty—which usually happens in about half an hour.

From all the observations made at this time, I conclude that drones cannot be relied upon for sexual duty, until they are at least eight days old, and that most of them are not serviceable quite so young. Unlike the common bee, the drone having no special office inside the hive, it is wisely ordered that it should seek to mate when about half the age of a worker.

September 15—The temperature was 60° to 76°, and the weather was cloudless. At 1 p.m. drones were in full flight. I put a Jones' perforated-zinc guard on that strong nucleus, to be able more easily to catch the returning drones. The most of them evidently flew to mate; the last two were gone 51 minutes. I caught them all; they filled two large queen-cages. After most of them had been confined over half an hour, I placed the open cages more than a foot from the hive-entrance. To my surprise, many of them unable to take wing, crawled to "the flight hole," a truly woe-begone set of beggars, impatient, nay importunate, to be fed; and the workers were all eagerness to supply their wants! One, too far gone to crawl or even to beg, on having his proboscis wetted with thin syrup, though at first barely able to take it, soon grew strong enough to fly. From numerous experiments made at this time, it seems that if drones are kept from feeding only half an hour after returning from a wedding-trip, they become too weak to fly.

Catching, on the same day, some drones which were being worried by a strong colony, their honey-sacs were found to be well filled. It is easy to see how soon a drone must succumb, if the bees merely prevent it from eating. I believe that more perish in this way than by any actual violence done them by the workers.

I hope to be able to continue this subject in a future number.

Dayton, O., Jan. 10, 1888.

FIRE INSURANCE.

Insuring and Wintering Bees—Sowing Alsike Clover.

Written for the American Bee Journal
BY J. B. LINDLE.

In reply to Mr. C. A. Waldron, about insuring bees against loss by fire and lightning, I will say that I have $500 insurance on bees in the cellar or in the yard, not to exceed 200 feet from the dwelling; the valuation not to exceed $10.00 per colony. They were insured on April 17, 1883, for five years, in the Phenix, of Brooklyn, N. Y. I could have taken $1,000 insurance. During this time my apiary has never exceeded 270 colonies, nor have I had less than 140 colonies.

Owing to demand, sale, and the season, to-day I have over 100 colonies less than on June, 1887, as many of them starved. I did not obtain one pound of surplus honey, and I fed over 1,200 pounds of honey in frames and half-filled sections extracted from the year 1886. I have never fed 50 cents worth of sugar, although I have handled and kept bees for 31 years, and for over 15 years I have made it my special business. At least 25 per cent. of my colonies are light now.

Bees Wintered in the Cellar.

I winter my bees in the cellar, the hives being about four inches from the floor, and tiered 4 or 5 high. There is no covering over the honey-board, or oil-cloth on top, and the entrance is left wide open. I never allow the temperature to be below 40°, and never above 48°, if I can possibly help it. I have wintered bees with the honey-board off, and experimented in different ways, but for over five years I have wintered my bees as above stated.

The hives are tiered up now, with access to the front of each hive or entrance, to examine the entrance in order to keep it open. So far this winter my bees have been more quiet than usual, and scarcely any dead bees are outside. They seem to enjoy it in the

cellar, with the mercury 28° below zero outside.

Sowing Alsike Clover for Bees.

I can endorse all of Mr. Baldridge's article on page 10, except that I would sow 4 pounds of Alsike seed on most land, and not on thin, dry, sandy land. It will catch in wild-grass sloughs. It thrives best with red-top clover or pasture. If for seed, sow 10 pounds per acre, and it will not lodge so badly. Be sure to get clean seed, and not mixed with sorrel, as some Eastern seed is.

Muscatine, Iowa, Jan. 16, 1888.

BEE-CELLARS.

Wintering and Insuring Bees in Cellars.

Written for the American Bee Journal

BY E. W. COUNCILMAN.

This article is written in appreciation and corroboration of Mr. A. C. Tyrrel's article on page 25, on "Bee-Cellars." Three years ago I built a bee-cellar, and finished late in the fall so that the mortar in the walls had not time enough to get dry. But the cold winter came on, and I put in it 25 colonies. Of course the combs became somewhat moldy, but I lost only 2 colonies.

Last winter, the cellar having had plenty of time to become thoroughly dry, I had no moldy combs, and I put out every colony on the summer stands that I had put into the cellar. This winter I have 80 colonies in the cellar, and from the best of my judgment I believe that I will carry them all through.

Now as to the secret of my success: Of course I wanted to discover all I could about the conditions, and as a consequence a thermometer has been in constant use during all temperatures of weather. The temperature in the cellar has ranged from 32° to about 45°. Always in going into the cellar, I would hear that low, contented hum, except perhaps towards spring, and during the warm, soft weather.

I have thought many times of making the cellar warmer, even by artificial heat, thinking that the bees would use less honey, perhaps breed faster, and come out stronger in the spring; but after comparing Mr. Tyrrel's experience with my own, I have concluded to adopt David Crockett's plan, when he hit the "bull's eye:" "Let well enough alone."

Insuring Bees in a Cellar.

In regard to insuring bees, mentioned by Mr. A. C. Waldron, on page 8, I would say that my bees are insured in the Dutchess County Mutual Insurance Company. We have no trouble here in getting our bees insured, any more than any other valuables in the cellar.

Bee-Mortality in the Cellar.

I had a similar experience in regard to mortality among my bees, as Mr. Pinkerton describes on page 11; and besides, quite a number of my colonies had the diarrhea. I attributed the trouble to honey-dew (a substance with which I am not much acquainted). I found a black, sticky substance stored in the hives (in some hives large, and others small quantities), which bee-men called "honey-dew." The bees which ate of this black and sticky substance, and especially those colonies that had stored a good deal of it, had the diarrhea, and large quantities of bees would be found dead in front of the hives. Up to the present time this winter, I have swept my cellar twice, and I have carried out perhaps not to exceed four quarts of dead bees. Last winter, from about half the number of colonies, up to the present time I am sure I had carried out twice or thrice that quantity. Indeed, I was frightened, for I thought that my bees were all going to die.

The mortality among bees throughout this State, and many other States, was terrible. Those who claimed to be competent to judge, estimated that one-half, or more, of the colonies died before the honey season was reached last spring.

My cellar is 14x18 feet, about 7 feet high, and has a cemented bottom. The walls are 2½ feet thick, and laid in cement. A 4-inch stove-pipe extends from near the bottom, near the centre, up through the kitchen floor, and is attached to the kitchen stove-pipe. This is all the ventilator the cellar has. The bee-cellar is separated from the vegetable cellar by a sliding door. I have been very successful in wintering my bees. The temperature ranges from 40° to 45°.

Newark Valley, N. Y., Jan. 13, 1888.

BEE-KEEPING.

What I Know and What I do Not Know about Bees.

Written for the American Bee Journal

BY J. M. HICKS.

I know that the year of 1887 was, as a honey year, in many localities a very poor one, and especially in this locality. We had no honey, but plenty of drouth. I know that but few bees have been so fortunate as to have gathered stores sufficient to last them through the winter; that I was not the only bee-keeper who failed to get an ounce or a pound of honey as a surplus from my apiary the past season, but I let the bees keep all that they gathered, and fed them over 400 pounds of honey besides, in order that they should be well provided with honey for the winter.

I am frank to confess that the last year has been the poorest throughout Indiana, as a honey season, that I have witnessed in 50 years, and there will not be a hundred pounds of honey placed on the market, of the 1887 crop, for each thousand pounds of 1886 crop, or, in other words, not one-tenth as much honey was gathered the last year as was gathered in 1886, and I predict that whoever eats honey on the good, old buckwheat cakes for breakfast, will pay a handsome price for both honey and buckwheat flour.

I know that the science of bee-keeping is fast simmering down and into the hands of only those who will pay proper attention to the business, in order to make it a success. I also find that it is not those who can count the greatest number of colonies that make the most money at keeping bees, hence it is quite evident that a locality or certain neighborhood may become overstocked with bees, just the same as a given number of acres of grass can be overstocked with cattle, horses or sheep.

The Unknowable in Bee-keeping.

I do not know that bees can be successfully kept where there is no natural resources for their support, and no effort made by the bee-master to supply pasture for them to gather honey from; neither do I know that bees can be made profitable in any apiary unless they receive proper care and attention in order to make them so. I have also long since found out that pure Italian bees, and the black or German bees of this country, cannot be kept in the same apiary and have all the increase pure of either race. Neither do I know (as some profess) that a pure Italian queen that has mated with a black drone, can produce pure Italian drones afterwards, notwithstanding the opinions of some naturalists to the contrary; and furthermore, I have not yet learned that virgin queens can produce drones that can be relied upon in further propagation of their race; or in other words, I do not know that such drones can be of any use in the fertilization of other queens, either Italian or native. To sum it all up, I am still of the opinion that if a book was written containing all that we did not know, it would be a much larger volume than the one would be if all we know about bees were published in it. Attend to the bees, and they will pay!

Battle Ground, Ind.

PAST—FUTURE.

The Mysteries of Bee-Keeping all Done away With.

Written for the Prairie Farmer
BY MRS. L. HARRISON.

The day of the log-gum and square box as a receptacle for bees is now past, excepting when on rare occasions, a runaway swarm is caught, and there is nothing at hand to put them in but a nail-keg or salt-barrel. From such a beginning, many large apiaries had a start, for when the bees persisted in living and increasing, until even the discarded body of a pump had to be used to put them in, their owner roused up to the necessity of further accommodations, and the result was a "patent hive."

Some enterprising individuals took advantage of this state of things, and went through the country building bee-palaces, which had a short run, but a merry one. Their dupes thought them splendid, though there was an abundance of those terrible moths.

Following the bee-palace came a square hive, set up on high legs, and run to a point below, so those terrible enemies of the bees, the moths, would roll out at the bottom. This was good in some respects, and is occasionally seen at the present day at farm houses. All attempts at keeping bees in houses have been failures with one exception, which is pronounced a success, but is covered by a "patent."

There are two ways of managing bees; one is to let them alone, and the other is to control them, at least in a measure. In order to do the latter they must be in a receptacle from which they can be removed at the pleasure of their owner.

"Dehorning" Bees.

The secrets and mysteries of bee-keeping have all been let out of the bag, by the introduction of the movble-frame hive. And if some enterprising bee-keeper would only discover a way of removing the sting in like manner as horns are now removed from cattle, bee-keeping would make rapid advancement.

On my way to Chicago to attend the late bee-convention, I sat for a while in a seat with a lady who, in company with her husband, was bound for the Fat Stock Show. She said they were engaged largely in rearing Short-horns, and that last summer they purchased a vicious bull which she had feared would kill some of her children. The men had not had time to dehorn him until recently, but after it was done it was laughable to see how meek he was; the fight was all taken out of him. It did not appear to hurt him a mite, for he went immediately to eating hay. Now, who will imitate the cattle-raisers and dehorn the bees of there weapons?

Apiarists are very uneasy, never content to tread in the beaten paths of their fathers; and when you think that you have the latest furniture, fully up to the times, something new is invented which leaves you far in the shade. The latest "fad" is invertible hives. Now, I cannot imagine what could possess any one to turn a hive upside down. I never tried it, but one of our horses did, and he did not want to repeat the experiment, neither did I, or the bees.

Peoria, ⊙ Ills.

UNFILLED SECTIONS.

How to Utilize the Comb in Unfilled Sections.

Written for the American Bee Journal
BY W. H. STEWART.

It seems to trouble a great many bee-keepers to have so many unfinised sections at the close of the honey season. Now these unfinished sections I look upon as so many blessings, and I would like to have ten thousand of them on hand the coming spring. I do not want them to go back on the hives again for comb honey, but I will tell the readers how I dispose of them:

In the fall, after the honey season is over, I put them in wide frames, extract the honey, and then put the sections out of the way of the mice. I always use full sheets of worker foundation in the sections. In the spring, when the weather gets warm, or just before swarming time, I take a case-knife and run it around the inside of the section, cutting the comb out nice and square. These combs I fit nicely in the brood-frames, and fasten them with transferring strips or pieces of hard, twisted twine.

I always rear my own queens, and when one begins to lay, I give her a couple of frames of hatching brood, and fill up the hive with these filled frames, or hang them in extracting supers. In a short time I have worker-comb which is as nice and straight as any one would wish to see. These combs do not cost me as much as full sheets of worker foundation for the brood-chambers, yet they are just as nice and as good.

Let bee-keepers, like myself, who have more time than cash, try my plan and see if they are not well paid for their trouble; for I think that it does not pay a bee-keeper who buys all his foundation, to melt up a piece of comb four or more inches square.

Galt, ∽ Ills.

QUEEN-REARING.

The Three-Cell Plan of Rearing Queens.

Written for the American Bee Journal
BY J. H. HIGGINS.

In regard to queen-rearing, I would say that a great many queens can be reared by the lamp-nursery method, and also by the nucleus plan; but are they as good queens as any? My experience says they are not. They are smaller, and do not live long; neither do they fill their hives with bees as well as do queens that have been cared for from the egg. The workers are not so large, and they do not work so well as do those reared from other queens; hence so many weak colonies and no honey. Can we not remedy this? I think that we can, and my practice proves to me how it can best be done. It is as follows:

I use a 9-frame hive, and when I want queens, I take from a strong colony the queen and all the brood-frames, and give them one frame of eggs just beginning to hatch, which I take from a choice colony. I then place one of their frames of honey on each side of the frame of eggs until the next day; this being done in the evening. The bees build queen-cells that night, some of them being good ones, and others are not. The following day I pinch off all but three of the best queen-cells, and give the colony some honey and six frames of brood just gnawing out. Bees will then be hatching all the time, which will keep the colony very strong, and the queens will be fully developed.

On the tenth day I divide the colony into three parts, with a queen-cell in each division, and give them the first six frames that I had taken from them.

Queens reared as above described, have proved to be good in every case; they are always large and prolific, and bees reared from them are large, are excellent workers, and they can carry more honey than can bees reared from inferior queens. The queens will lay more eggs, and last longer than any others that I can produce. They also winter well and build up very rapidly in the spring. I have them now nearly one-third larger than any bees I ever saw here.

I read of "over-dosing," in the BEE JOURNAL, but they do not do it for me with the "three-cell plan," as I call it. I believe in keeping all colonies strong at all times, and this is one of my plans of doing it. Try the plan and be convinced. But it will not do to rear "dollar queens" in this way; at least I could not do it.

Victoria, ∽ Tenn.

ANATOMY.

Rudimentary Glands in Bees, and the Evolution Theory.

Written for the American Bee Journal
BY PROF. A. J. COOK.

I am very glad to answer Mrs. Chaddock's very pertinent questions on page 44. The rudimentary gland of the queen surely argues not conclusively, of course, that the old-time queens were possessed of the same glands functionally perfect. Richer food, through long ages, developed enlarged ovaries, and a correspondingly greater fecundity. At the same time, less use caused a wasting away—atrophy—of the glands in question. The condition of the glands illustrates the law of retrograde development. In the same way snakes have lost their legs. Zoologists find rudimentary legs now, and believe such legs indicate legs once useful.

True, the absence of such glands in drones, and their reduced size in aged workers, argue neither for nor against evolution. Yet unless drones were to to change their habits, we can readily see that "natural selection" could not lay hold of any variation in structure to produce such glands.

That rudimentary organs are in themselves conclusive proof that they originated from a useful condition of the same organs, is surely disproved by Mrs. Chaddock's happy illustrations. Yet from the study of fossil forms, and such animals as the blind fish in caves, together with the study of all related living species, have convinced biologists that in most cases rudimentary organs are the result of atrophy from lack of use.

Agricultural College, ♀ Mich.

REVIEW.

The New Bee-Book Lately Issued by Mr. Simmins.

Written for the Canadian Bee Journal
BY SAMUEL CUSHMAN.

"A Modern Bee-Farm, and its Economic Management," is the title of the latest addition to bee-keepers' literature, and is written by Mr. Samuel Simmins, an extensive English honey-producer and queen-breeder. Many of us have his valuable pamphlet (before mentioned in these columns), and those who found that a treat will not be disappointed in this his latest production.

As the title implies, he tells us what he does and how he does it in the great Sussex apiaries, and it seems to me that bee-keepers must be few who cannot find something new as well as interesting in the book.

The author tells us in the preface, that practical bee-keeping is his subject, and that with few exceptions the instructions given are based upon the writer's twenty years' experience in the apiary. That he has learned more by his failures than by his successes, as in the endeavor to overcome his difficulties he has brought out his most important methods of management. He believes the man who can give the subject close study and application, and finds himself adapted to the undertaking, may safely invest his money, and receive better returns than from many other occupations of the present day.

The book is not in any sense an encyclopædia of modern bee-knowledge; the author simply gives the methods found to be most economical and practical.

Under "Bee-Culture as a Profession," beginners are advised to first serve a couple of years in some well-established apiary, instead of keeping a few colonies and gradually increasing the number. Time and money will be saved, better plans formed, and success will be more certain. The amount of capital required is considered, and the various expenses estimated. Five hundred pounds, or about $2,500 is considered necessary to properly commence the business with 100 colonies.

Much valuable advice is given on the sale of bees and queens, and under the manufacture of appliances beginners especially are advised to steer clear of the business of selling supplies. In the economy of the hive, the suppression of drone-production is a step toward the prevention of swarming.

The chapter on "The Varieties of Bees," is equal to anything I have seen on the subject. Blacks or natives are highly valued because they are well adapted to the production of comb honey; and when the bee-keeper has all the colonies he requires, no objection can be made to the sole use of this race when comb honey alone is sought for, although he mentions further on that pure blacks cease storing quite a month sooner, and are frequently troubled with wax-moths, while the foreign varieties never are.

It is claimed that blacks have great conservative energy; that the young commence work outside at a much earlier age, and a given number will produce and maintain a much larger amount of heat than the same number of any other race. That here is the sole reason why these bees are always ready to take to the supers, and are better comb-builders than others, though they may be occupying the same space with less than half the population. That here we have the best material for an improved strain of bees; and that by the admixture of foreign blood we may get greater laying-powers in the queen, a better disposition in bees, and eradicate the inclination to cease storing honey toward the close of the season, while it is yet to be gathered.

He advocates breeding from black queens crossed with Carniolan or yellow drones, Cyprians preferred to Italians. Black or Syrian drones should be vigorously excluded. He says that Italians store honey and draw out foundation later in the season than natives, as well as gather more honey; also they are more gentle, but their comb honey is not quite so good, and they are not as good comb-builers, are slow to enter supers, and quite useless for queen-rearing purposes. That Carniolans, of all pure races, are the best "all purpose bee," although not quite equal to the Cyprians as honey-gatherers; are the most gentle of all, and best for beginners. He thinks they were at one time a cross between the Cyprians and Germans, and the color reverted back to that of the majority. That Cyprians are destined to take the lead among the yellow races; though not suitable for the production of comb honey, they are very active honey-gatherers, of great beauty, and (with him) extremely docile. Their body is smaller than the native variety, and unlike the Italian workers, opens to a fine point.

In chapter 6, "How to Obtain Good Working Colonies," we find the following: "The secret of successful honey production consists in always maintaining the proper proportion of adult working bees in relation to the quantity of brood and young bees." That in our working colonies we should always have young queens, and retain none that have seen their second summer. That queens cannot be too prolific, but must do their best before the season opens, after which they will simply keep pace with the wear and tear upon the life of the workers. To provide that the best powers of the queen shall be used up before actual storage commences, we are to have young queens in very strong colonies the fall before.

There is much valuable advice given in the chapter on planting for bees, and we are assured that *systematic planting makes profits certain.*

I was much interested in feeding and feeders, buying, packing and moving bees, and especially in the production of wax, non-use of foundation, and management for heather honey.

It gave me great pleasure to see the following under queen-rearing: "It has been observed that a young queen

feeds upon pollen extensively until she has met the drone, from which time she is fed by the bees entirely upon digested food. Now just here I wish to show the folly of keeping young queens confined in the frame nurseries for a number of days after hatching, as is done extensively in several American queen-rearing apiaries. Without the nitrogenous food at this time when the constitution should be established, they are dragging out their existence upon sugar alone at the most important period of their growth."

Mr. Simmins believes, as does Mr. Alley, that better queens can be reared by proper artificial means than under the swarming-impulse.

In justice to the author I refrain from giving more of this book, but I can assure the readers that I have given but a small part of its good points. This work is now for sale in this country. It contains nearly 200 pages, and is well illustrated. I advise all progressive bee-keepers (especially those who make it a business) to thoroughly study this book.

Pawtucket, ♁ R. I.

PALESTINE.

An Account of Bee-Keeping there by an Eye-Witness.

Written for the British Bee Journal
BY J. BALDENSPERGER.

There is only one way to enter the "land flowing with milk and honey." According to mythology, Andromeda was exposed on the rocks lying out before the town of Jaffa to the seaside, forming a small harbor for little sailing vessels, and was delivered by Perseus from the sea-monster going to devour her. It is wild enough, the entrance to this town. I have been standing on the shore looking out for friends coming back from France and England, have seen them fighting their way through the angry sea, and exposed to the waves carrying the boats high up to the top and down again into a deep gulph of water hiding them from sight. Why do they not choose an easier way? The steamer can come no nearer, for the rocks which abound here. It is always a terrific sight to see travelers and pilgrims landing. Yet after having traveled so many days and nights, it is only a mile on the raging sea to touch the Holy Land. It is here the prophet Jonas found a ship going to Tarshish, embarked for that place, and was seized by a tempest. Joppa of the ancients, now Jaffa, is the port of Jerusalem. It is here that numbers of bees are kept, both in the orignal way of keeping them, *i. e.*, in clay pipes, and in Langstroth hives, kept only by your humble servant.

Although Palestine is acknowledged by many authorities to be the real home of the honey-bees, and although we never read in the Bible of bee-keeping, yet, very often we read of the "land flowing with milk and honey" promised to Moses. Some writers on Palestine are mistaken when they mention wild bees as more abundant than the domesticated ones, because, in Psalm lxxxi. 16, the Lord promises honey out of the rock; this is only to illustrate the abundance in saying, "Even out of the rock shall I fill thee with honey." In nowise was it meant that the honey out of the rock was more abundant than the honey out of domesticated hives. Although it is possible runaway swarms were more secure from the interference of man before the invention of gunpowder, because they could not easily be had without breaking the rocks, yet certainly they did get some, or else it would not have been mentioned.

Very likely the Canaanites kept bees in the same way as the Arab population of Palestine, partly their descendants. All Eastern invasions were followed by a retrograde movement, agricultural, architectural, industrial, etc. We know that the Canaanites had chariots and highways, but nowadays an Arab is astonished to see a chariot, introduced only about 18 years ago from Europe; and, to use their own expression, it is a "thing moving along with nothing but two horses in front to drag it." They had oil-mills exactly the same as now. The invasions destroyed arts and sciences, whilst the weaker inhabitant of the country was always more or less abandoned, and continued in his primitive industry, thus carrying throughout more than thirty centuries household and agricultural implements without the least improvements, and in many cases carrying the very name throughout all the generations, notwithstanding the change of languages from the Canaanites, Hebrews, Greeks, Romans, Arabs, Latins to Turks and Arabs again.

Go to an Arab village, and you will find women grinding at the mill, either alone or as illustrated in Matt. xxiv. 71, "Two women shall be grinding at the mill." The mill is small, and can easily be transported. Two women sit down on each side of the mill (the upper mill-stone having a handle with just place enough for two hands), thus driving the mill, and singing a monotonous, solemn song of their departed loved ones and friends. It is to be concluded that the aborigines of this country kept bees in the same way as the inhabitants now do, by comparing the above.

Honey was always abundant in Palestine—I mean real bees' honey, gathered from flowers of all kinds abounding in the land, the almond, pear (our largest crop), the orange-blossom, and the cactus; and in summer-time, when everything seems dry, the sesame (from the seeds of which the oil of sesame is produced, and used to a great extent in the country), and the labiate flowers, from which still the very highly flavored and high-renowned honey of Hymettus was gathered from thyme-blossoms.

Though some travelers tried to illustrate the fact of honey flowing from the trees, it is in no way common, for the want of trees or forests; and in the case of Jonathan, 1 Sam. xiv. 25–30, the honey was not dropping from the trees, but was flowing upon the ground, according to the new version; and, furthermore, Jonathan dipped his rod in a honey-comb, thus it was no honey-dew, and he said: "My father hath troubled the land; see, I pray you, how mine eyes have been enlightened because I tasted a little of this honey. How much more, if the people had eaten freely to-day of the *spoil of their enemies* which they found?" The Israelites came on the encampment of the Philistines, and suddenly fell on them. They overthrew everything, and the honey, kept in jars or he-goat skins then as nowadays, was overturned by the frightened cattle and soldiers, and was *flowing upon the ground.*

The honey-dew is only found in some trees, but in no locality that I know of, will it yield honey enough to give anything more than a taste to bees in search of water or pollen during the intermediate months of the honey-flow. In the Jordan Valley no bees are kept, because only the nomadic Arabs live here, and never trouble themselves in their wanderings with bees.

I dare say, except orange-trees and cactus-plants introduced here, the other honey-plants have always been here, and the country yielded honey in quantity sufficient to form an article of export (Ezek. xxvii. 17). Honey was translated from the Hebrew "dabash," the real old name for honey. The Arabic word for honey is "assal," whilst a treacle made of the juice of grapes and boiled is called "dibs" or "dibes" in Arabic; wherefore many writers suppose that the honey so often mentioned in the Bible was not bees' honey, but this dibes or grape-treacle; when we read in Judges. xiv. 8, 9, that there was a swarm of bees (daburin) and honey (dabash) in the carcass of the lion, and that Samson

took thereof in his hands and went on eating, it leaves no doubt as to the identification of "dabash" with honey, and can therefore be applied to most other instances of "dabash" as honey, excepting a few cases, as in Job xx. 1.

"Brooks of honey," were most probably meant for the grape-treacle, as can easily be understood if you bear in mind that grapes still are pressed out in pits cut into the rock, and flowing from one pit to another for purification, which was the method used thousands of years ago, and certainly never applied in the use of honey, because of robber bees and the thickness of honey too much would thus be wasted. The thinner treacle can easily be taken out of the rock again without much waste. And again, this "dabash"—bees' honey—was collected by the bees (daburin), and not the hornets, as suggested by some; hornets are now called "dababeer," and "dabur," the singular Arabic. The mixing up of the two names is comprehensible when we remember that the root of the word, "dabr," signifying "the buzzer" or "buzzing," was given to all Hymenoptera and Neuroptera, and was only distinguished later when civilization came in, and Arabs called the common fly "dibaan," the hornet "dabur," and the bee "nahle;" so with the sweets "dibs" or "dibes," the grape-treacle, and "assal" honey.

In almost every village of Palestine and Syria bees are kept, and, with a very few exceptions, they do not keep such numbers to depend upon them for their living, but simply a few hives placed one on the top of the other, having an arch built over them or some protection intended to keep away the hot sun-rays, which in summer-time would melt the combs but for the protection. The clay pipes are very cool as long as they are kept in the shade, but as soon as exposed to the sun they become fearfully hot. In winter time the accumulation of the hives keeps them warm in the first place, and again, nature helps itself, for any colony unable to winter is destroyed in the course of the autumn, by different enemies abounding here as in all other countries. The hornets, the wax-moth, the tellio-agamide, and gecko abounding here, and the bee-eater, being the most dangerous ones to be named.

In general, bee-keeping is carried on in very primitive and negligent ways in some respects, as weak colonies are never cared for—all such colonies are left over to themselves. The good colonies with plenty of food and bees only successfully pass the winter, thus establishing a good stock on one hand, whilst on the other, weak colonies could be united into a strong one.

The only work performed is in the swarming season, when swarms are watched for a few weeks in April and May, and hived into clay cylinders. The back covers are put on after hiving, and besmeared with wetted argillaceous earth. The interior is rubbed with citron leaves, and the small fly hole stopped with a few herbs for a day or two. They are then released, and not again looked to till the honey-crop.

In some localities honey is taken twice, gathered from the early flowers and in September. The more general honey harvest is the September crop. The covers are then hastily broken open, a few puffs of smoke from the pitcher-smoker (and it is a pitcher with a hole in the bottom, filled with manure; some burning coals are put into it, and by continual blowing the smoke is kept going) are blown on the bees, a comb or two of honey is cut out and put away, the cover is immediately replaced, and the bees are left to themselves for a whole year. In such apiaries the moth is the worst enemy, destroying numbers of bees yearly.

In the watered localities, or such as afford good food for the carnivorous hornets, the bees suffer greatly by them. They are the only enemies against which the inhabitants use their skill; they burn heaps of manure in front of the hives, keeping up a smoking for several weeks, from September to the beginning of November, which keeps the hornets out and the bees in.

The Palestine bees are good honey-gatherers, and the queens are very prolific and beautiful. It is not rare to have colonies yielding upwards of 100 pounds for a single crop, though it is not the average. This is for bees handled in Langstroth hives—our system. Excepting during the orange-blossoming in April, our bees can be handled without a veil, the strong perfume at that time filling the air rendering them fierce. Have any of your correspondents any experience as to the reason why bees are fierce—influence of weather, scent of flowers, etc.? With us the east winds render the bees angry, and the strong odor of orange-blossoms makes them fierce.

Jaffa, Palestine, Dec. 7, 1887.

BEE CONVENTIONS.

Wisconsin State Convention.

The bee-keepers of Wisconsin meet in their fourth annual convention, at the Capitol in Madison, Feb. 8, 1888.

In consequence of the State Agricultural Convention being held in the same week, with its usually interesting essays, speeches, papers and discussions, the bee-convention will probably last but one day. Reduced rates can be secured on all railroads, thereby making the expense much less, and giving those who wish to do so, a chance to attend both conventions.

The following is the programme for the convention:

President's Address, C. A. Hatch, Ithaca
Notes from American Bee-Keepers' Convention, Frank Wilcox, Mauston.
Relation of Producer to the Commission Merchant, A. V. Bishop, Commission Merchant, Milwaukee.
The Heddon Hive and How to Use it, W. H. Putnam, River Falls.
How to Build a Bee-Cellar, D. D. Daniher, Madison.
How to Get the Best Extracted Honey, E. France, Platteville.
Comb or Extracted Honey; Which? F. Minnick, North Freedom.
C. A. Hatch, President, Ithaca, Wis.
Frank Wilcox, Secretary, Mauston, Wis.

Susquehanna Co. Convention.

The Susquehanna County Bee-Keepers' Association met at the Jay House, at New Milford, Pa., on Jan. 7, 1888. A discussion on the "Prevention of increase," began the proceedings of the day, and which was fully discussed. The subject, "Is it advisable to Italianize an apiary?" was taken up, and after a thorough discussion, it was decided that it was advisable. An interesting talk about hiving swarms was then given by E. B. Smith.

The number of colonies reported by 17 members, was 334, spring count, and increase, 191 colonies. Amount of surplus honey reported was, 11,175 pounds. H. M. SEELEY, *Sec.*

CONVENTION NOTICES.

☞ The Eastern New York Bee-Keepers' Association will meet on Jan. 24, 25 and 26, 1888, in Agricultural Hall, at Albany, N. Y. Every one is welcome. We are sure to have a pleasant an profitable time.
JOHN ASPINWALL, *Sec.*

☞ The Des Moines County Bee-Keepers' Association will hold its next meeting on April 24, 1888, at Burlington, Iowa. JOHN NAU, *Sec.*

☞ The Hardin County Bee-Keepers' Association will meet at the Court House in Eldora, Iowa, on the second Saturday in each month, at noon (12 o'clock), until further notice.
J. W. BUCHANAN, *Sec.*

☞ The next regular meeting of the Stark County Bee-Keepers' Society will be held in Grange Hall at Canton, O., on Feb. 4, 1888. A full attendance is desired, as business of importance will be considered.
MARK THOMSON, *Sec.*

☞ The Northeastern Ohio, Northern Pennsylvania and Western New York Bee-Keepers' Association will hold its ninth annual convention in the Commercial House Parlor, in Meadville, Penn., on Wednesday and Thursday, January 25 and 26, 1888. Reduced hotel rates have been secured.
C. H. COON, *Sec.*

☞ The next regular meeting of the Susquehanna County Bee-Keepers' Association will be held at New Milford, Pa., on Saturday, May 5, 1888. H. M. SEELEY, *Sec.*

Hilton's new pamphlet on Comb Honey Production has been reduced in price to 5 cents. For sale at this office.

CONVENTION DIRECTORY.

1888. *Time and Place of Meeting.*

Jan. 24-26.—Eastern New York, at Albany, N.Y.
John Aspinwall, Sec., Barrytown, N. Y.

Jan. 25, 26.—N. E. Ohio, Northern Pa. and W. New York, at Meadville, Pa.
C. H. Coon, Sec., New Lyme, O.

Feb. 4.—Stark County, at Canton, Ohio.
Mark Thomson, Sec., Canton, O.

Apr. 24.—Des Moines County, at Burlington, Iowa.
John Nau, Sec., Middletown, Iowa.

May 5.—Susquehanna County, at New Milford, Pa.
H. M. Seeley, Sec., Harford, Pa.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bees Insured, etc.—D. P. Stevenson, Kenton, ☌ O., on Jan. 16, 1888, writes as follows concerning the insurance of bees against loss by fire :

On page 8, Mr. A. C. Waldron says that he tried to get his bees insured against loss by fire, and was refused. Well, I have my bees insured against loss in case of fire, and in a good company, too. My 40 or 50 colonies of bees are kept on the summer stands, between the dwelling-house and barn, on about one-fourth of an acre of ground, fenced in for a chicken park. I have dwelling-house, chicken-house, bees, barn, horses, cows, grain, etc., all insured in the same company. Bees did very poorly here the last season. It was too dry.

Wintering Well.—S. H. Mallory, Decatur, ♀ Mich., on Jan. 10, 1888, says :

Bees are wintering well here so far. We have had quite mild weather most of the time ; 4° below zero being the coldest registered here. We are having a regular Michigan blizzard to-day.

Bees Packed in Leaves, etc.—Otto Kleinow, Detroit, ☌ Mich., on Jan. 16, 1888, says :

I began the winter with 86 colonies of Italian bees, about 75 colonies of them being in fine condition ; some of the others were weak and short of stores. All are on different sized frames, some in one and two story chaff hives, and some are in single-walled hives ; they are packed with leaves all around, and under the bottom, and all are alive now. Last season was very dry here, and bees hardly gathered enough for winter stores ; some of them I had to feed. I fed about $25 worth, of the best granulated sugar. Some of my colonies had from 25 to 40 pounds of honey in the hive. By Nov. 1, 1887, a few had only about 1 to 5 pounds of stores ; those, of course, were the late swarms.

Hive-Entrances in Winter, etc.—W. S. McCrum, Etna Green, ♂ Ind., on Jan. 16, 1888, says :

My 20 colonies of bees are being wintered on the summer stands, packed with 4 inches of clover chaff all around, and about one foot deep on top. The entrances are ¾-inch by 4 inches wide. 1. Is that too large ; or is it not large enough ? 2. Would it not be better to close the entrances, or nearly so, with snow, when the temperature is at zero or below ?

[1. It is preferable to have the hive-entrances ¾-inch high, and the whole width of the hive.

2. It would be as well to allow the snow to cover the entire hive, for protection against the cold.—ED.]

The Season of 1887.—Clarkson Pemberton, Lamoille, ☉ Iowa, on Jan. 16, 1888, writes :

I had 26 colonies of bees, spring count, but as the honey crop was very short, I obtained only 200 pounds, and that was all from basswood. White clover was a failure in this part of Iowa. Bees did very poorly in swarming ; I had only 4 or 5 swarms the past summer. I think that all of my bees have honey enough for the winter. I like the BEE JOURNAL very much ; I could not do without it.

Cold Weather for Bees.—John W. Blodget, Flag Springs, ☌ Mo., on Jan. 16, 1888, writes :

The bees are going through the coldest spell that I ever saw in this country. On Jan. 13 the thermometer registered 14° below zero ; on Jan. 14, 12° below ; on Jan. 15, 26° below—the coldest that I have seen for 20 years, or over. I should think that bees in single-walled hives would freeze if ever bees freeze. I would like to see Mr. Doolittle throw bees on the snow with the mercury at 26° below zero, and then bring them to life again.

The snow is from 4 to 6 inches deep on a level, and the east and west lanes are drifted badly, being almost impassable. I think that the snow will protect the white clover from winter-killing. The only trouble is, that the ground being frozen, the water from the snow cannot get into the ground, and will all run off into the streams, and thus leave the ground as dry as ever ; if so, we will have to depend upon spring rains to raise a crop of honey or vegetables. I welcome the weekly visits of the valuable BEE JOURNAL every Thursday.

Bees in Good Condition.—John K. Rich, Cato, ☉ N. Y., on Jan. 10, 1888, writes :

Last spring I had 17 colonies of bees, of which I sold one, and increased the remainder to 26 colonies. I sold one colony in the fall, and put 13 into the cellar ; the rest are on the summer stands, packed with planer shavings. I took nearly 800 pounds of honey, the most of which was comb honey, being a yield of about 32 pounds per colony, of basswood ; the balance was buckwheat and golden-rod. All of my bees are in good condition, and are wintering well.

Syrio-Albino Bees, etc.—E. F. Meeker, Duncan, ☉ Ills., on Jan. 12, 1888, says :

I commenced the past season with 120 colonies of bees, and I now have 138 colonies in the cellar. I did not take over 400 pounds of honey. The Syrian bees were far ahead of the other races the past season. I have them crossed with the Albinos, and I find that they are not bad to handle. I would like to hear from others, as to which of the races did the best the past season.

Golden-Rod and Aster Honey.—Abner Picket, Nassagaweya, Ont., on Jan. 9, 1888, writes :

I enjoy the weekly visits of the BEE JOURNAL very much. I am very fond of the bee-business. I commenced the past season with 91 colonies, increased them to 126 colonies, and have taken 4,200 pounds of extracted honey. The season became so dry that they could not get any honey until golden-rod and asters bloomed, then the bees filled up the hives very fast. I did not have to feed any, and I have them all in a wintering-house. They seem to be doing well. The temperature ranges from 40° to 44°.

Determined to Persevere, etc.—Edw. Margileth, Mt. Carroll, ☌ Ills., on Jan. 16, 1888, says :

The BEE JOURNAL has been a constant source of interest as well as profit to me ever since I started in apiculture, which was in 1883, when I commenced with 2 colonies of hybrid bees. I am wintering 29 colonies in a cellar

at a temperature of from 45° to 38°, according to changes of the weather, and I am quite confident that the bees will winter all right. Notwithstanding the poor honey crop last year (I realized only about 300 pounds of comb honey from 27 colonies), I shall still persevere, hoping for better results.

Surplus Crate for Reversible Hive.—E. D. Keeney, Arcade, N. Y., on Jan. 8, 1888, asks:

1. Will Mr. Heddon please tell the readers of the BEE JOURNAL which kind of surplus crate he would use on his new hive, to get the most marketable comb honey, one year with another? The expense of the different kinds of crates is not to be considered. 2. Also, when bees are placed on the summer stands in the Heddon hive, in one section (packed to keep them warm), and they become populous and crowded, would he place the second section on top, or unpack and place the second section underneath? Which, in his estimation, would give the better result in breeding?

[1. I would use my reversible wide-frame and tin-separator surplus case, with the screw pressure, and reversible wide-frames, every time, in preference to any other style of case, where the matter of expense is not of great importance.

2. If your bees are "packed" at the time of year when a second brood-case will be needed, I do not care whether you put it above or below. If not packed, put it below, because it encourages the queen to renewed activity equal to spreading brood; and yet it does not spread the brood, but keeps it in the warmest part of the brood-chamber.—JAMES HEDDON.]

Cellar-Wintering of Bees.—G. W. Ogden, DeKalb, Mo., on Jan. 4, 1887, writes:

On April 20, 1887, I had 6 colonies of bees, and by buying some colonies and building up others, I had 34 colonies, from which I obtained 300 pounds of honey; but in the fall I had to feed 200 lbs. of sugar before putting them into the cellar, and then they were light in stores, but they are doing well.

Much is said about cellar wintering, but not enough. A cellar that is too cold is worse than none, and one too warm is the same. It should be dry and well ventilated; the temperature should range between 40° and 50°; it ought to be made as dark as possible, and not visited more than once a week, to see that everything is all right. With a good light, any hive desired can be opened, with the temperature at 40°, and if necessary, proper care being used, syrup can be poured inside of the cover, and the cover then replaced. I have kept bees for 7 years, and what I knew about bees before last year I had gained by experience; but it was pretty expensive learning.

Honey Crop of Colorado.—J. M. Clark & Co., Denver, Colo., on Jan. 16, 1888, write:

The crop of honey in this State, last season, though not a full crop, was larger in proportion to the number of colonies kept, than in any other State.

Light Cellar for Bees.—H.S.Ball, Granby, Quebec, on Jan. 1888, says:

I live about 25 miles north of the State of Vermont, and for 15 years I have wintered from 25 to 60 colonies of bees without a single loss from other causes than starvation. I winter my bees in a common dwelling-house cellar, where more or less vegetables are kept. How is that for this cold climate? The bees usually remain in the cellar from Nov. 18 to April 15. But man is never fully satisfied, and so I think that bees would winter still better in a light cellar. We all know that a light cellar is healthier than a dark one, as a light room is. Will experienced bee-keepers please state their opinions and experiences in regard to wintering bees in a light cellar? For 2 months this winter I kept my bees in the cellar before darkening the windows, and they seemed to enjoy the light.

Bees Wintering Well.—C. A. Haines, East St. Louis, Ills., on Jan. 11, 1888, says:

I had 5 swarms and 1,000 pounds of comb honey from 45 colonies, spring count, the past season. My honey was all from fall flowers. Bees are wintering well on the summer stands. I could not get along without the BEE JOURNAL.

Poor Season in Louisiana.—Dr. D. R. Fox, Jesuit's Bend, La., on Jan. 11, 1888, writes:

Bees did nothing here the past year, having barely supported themselves. I have extracted no honey since Feb. 1, 1887, and scarcely had a swarm, being an unprecedented state of affairs in this vicinity; and I have been keeping bees here with much profit for 15 years.

Honey and Beeswax Market.

CHICAGO.

HONEY.—We quote: White clover 1-lb. sections 18@20c.; 2-lbs., 16@18c.; dark 1-lbs. 17@18c.; 2-lbs. 15@16c. Extracted, is firm at 7@10c., depending upon the quality, and style of package. Dark, 2 or 3 cts. below above quotations. Receipts light and demand fair.
BEESWAX.—22@23c.
Dec. 20. S. T. FISH & CO., 189 S. Water St.

CHICAGO.

HONEY.—Prices range from 18@20c. for the best grades, with light demand; 2-lb. sections, 15@16c. Dark is not wanted. Extracted is steady at 7@10c., according to style of package.
BEESWAX.—20@23c. R. A. BURNETT,
Dec. 7. 161 South Water St.

DETROIT.

HONEY.—Best white in 1-pound sections, 18@20c. Extracted, 9@10c. Demand brisk.
BEESWAX.—22@23c.
Jan. 20. M. H. HUNT, Bell Branch, Mich.

CLEVELAND.

HONEY.—Best white 1-lbs. sections sell at 19@20 cts. Extracted 7@8c. Demand small and supply fair
BEESWAX.—22@25c.
Dec. 15 A. C. KENDEL, 115 Ontario St.

NEW YORK.

HONEY.—We quote: Fancy white in 1-lb. sections, 18@19c.; the same in 2-lbs., 14@16c.; buckwheat 1-lbs., 11@12c.; 2-lbs., 10@11c. Off grades 1@2c. per lb. less. White extracted, 8@9c. Market dull.
BEESWAX.—22@23c.
McCAUL & HILDRETH BROS.,
Jan. 20. 28 & 30 W. Broadway, near Duane St.

KANSAS CITY.

HONEY.—We quote: Choice white 1-lbs., 18@20c.; dark, 16@18c.; choice white 2-lbs., 18c.; dark, 15 to 16c. Extracted, white, in 60-lb. tin cans, 9c.; in barrels, 8c.; dark, in barrels, 5@6c. California 2-lb. white comb, 18c.; dark, 16c. Extracted, white, in 60-lb. cans, 8@9c.; amber, 8c.
BEESWAX.—No. 1, 20c.; No. 2, 16@18c.
Dec. 19. CLEMONS, CLOON & CO., cor 4th & Walnut.

ST. LOUIS.

HONEY.—Choice comb, 18@20c.; latter price for choice white clover in good condition. Strained, in barrels, 5@6c. Extra fancy, and of bright color and in No. 1 packages, ¼-cent advance on above. Extracted, in bbls., 6½@7c.; in cans, 7 to 9 cents. Short crop indicates further advance in prices.
BEESWAX.—20c. for prime.
Dec. 19. D. G. TUTT & CO., Commercial St.

CINCINNATI

HONEY.—We quote extracted at 4@9c. per lb. Choice comb, 16@20c., in the jobbing way. The demand for extracted exceeds arrivals, and for comb the demand is tame.
BEESWAX.—Demand is good—20@22c. per lb. for good to choice yellow, on arrival.
Dec. 12. C. F. MUTH & SON, Freeman & Central Av.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 17@19c.; fancy 2-lbs., 15@16c. Lower grades 1@2c. per lb. less. Buckwheat 1-lbs., 11@12c.; 2-lbs., 10@11c. Extracted, white, 9@10c.; buckwheat, 6@7c.
Demand has slackened some, and to make sales we must shade above prices. About Jan. 15 we expect a more active demand.
Dec. 31. F.G. STROHMEYER & CO., 122 Water St.

PHILADELPHIA.

HONEY.—Fancy white 1-lbs., 18@19c.; fair 1-lbs 17c.; dark 1-lbs. are slow sale at 14@15c.; fancy 2-lbs., white, 15@16c.; buckwheat fancy 1-lbs., 13@14 cts.; common, 12c. Prices tend downward.
BEESWAX.—23@24c.
Dec. 11. ARTHUR TODD, 2122 N. Front St.

MILWAUKEE.

HONEY.—Choice white 1-lbs., 20c.; fair, 19@20c.; 2-lbs., 18@19c.; 3-lbs., 16@18c. White extracted in kegs or half-barrels, 9½@9¾c.; in pails or cans, 9¾ to 10c.; amber, in ½-barrels, 9¼@9½c.; dark in kegs and barrels, 7@7½c. Demand good, supply fair.
BEESWAX.—22@25c.
Dec. 15. A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—We quote: White to extra, 15@16c.; amber, 10@13c. Extracted, white liquid, 7@7½c.; amber and candied, 5½@6½c. Market quiet.
BEESWAX.—20@24c.
Jan. 14. SCHACHT & LEMCKE, 122-124 Davis St.

BOSTON.

HONEY.—We quote: 1-lb. sections, 16@17c.; 2-lb. sections, 14@15c. Extracted, 8@9c. The market is not very brisk and sales are slow.
BEESWAX.—25 cts. per lb.
Jan. 12. BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY.

HONEY.—We quote: Choice white 2-lb. sections, 17@18c.; dark 2-lbs., 14@15c.; choice white 1-lbs., 18 to 20 cts.; dark 1-lbs., 15@16c. White extracted, 7@8c.; dark, 5@6c. Demand is light.
BEESWAX.—21 to 22c.
Jan. 10, HAMBLIN & BEARSS, 514 Walnut St.

DENVER.

HONEY.—Best white 1-lb. sections, 19@20c.; 2-lb. sections, 16@18c. Extracted, finest grade, 12½c.; dark, 8@9c.
BEESWAX.—20@23c.
Jan. 16. J. M. CLARK & CO., 1400 Fifteenth St.